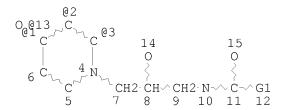
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GRAPH ATTRIBUTES: RSPEC 1 NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 11093 ITERATIONS 3 ANSWERS SEARCH TIME: 00.00.01

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FILE COVERS 1907 - 3 Dec 2009 VOL 151 ISS 23 FILE LAST UPDATED: 2 Dec 2009 (20091202/ED) REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAplus now includes complete International Patent Classification (IPC)

reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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2 L3 L4

=> d bib abs hitstr 1-2

- ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN L4
- 2003:656742 CAPLUS AN
- 139:197375 DN
- ΤI Preparation of piperidinyl alcohols as chemokine receptor modulators for treatment of diseases such as asthma
- ΙN Alcaraz, Lilian; Furber, Mark; Purdie, Mark; Springthorpe, Brian
- PAAstrazeneca A.B., Swed.
- SO PCT Int. Appl., 166 pp.

CODEN: PIXXD2

- DT Patent
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| | | | | | | KIND | | | DATE | | | LICAT | DATE | | | | | | |
| ΡI | WO | 2003 | 0687 | 43 | | A1 | | 20030821 | | | WO 2003-SE258 | | | 8 8 | | 20030217 | | | |
| | | W: | | | | | | | | | | , BG, | | | | | | | |
| | | | | | | | | | | | | , EE, , KG, | | | | | | | |
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| | | | | | | | | | | | | , NL, | | | | | | BF, | |
| | | | | CF, | CG, | | | | | | | , ML, | | | | | | | |
| | | 2472 | | _ , | | A1 | | 20030821 | | | CA . | 2003- | 2472 | 2472822 | | 2 | 20030217 | | |
| | AU 2003206554 | | | | | A1 | A1 20030904 | | | | AU . | 2003- | 2065 | | 20030217 | | | | |
| | AU | AU 2003206554 BR 2003007477 | | | | B2 20090507 A 20041109 | | | | | | | | | | 20020217 | | | |
| | | 1478624 | | | A1 | | 20041103 | | BR 2003-7477 EP 2003-705600 | | | | | | 20030217 | | | | |
| | ш | R: | | BE. | СН. | | | | | | | , IT, | | | | | | | |
| | | 1(• | | | | | | | | | | , TR, | | | | | | , | |
| | CN | 1633414 | | | , | A | | | | CN 2003-804130 | | | | | | | | | |
| | CN | 1003 | 5280 | 7 | | С | | 2007 | 1205 | | | | | | | | | | |
| | JΡ | 2005 | 5253 | | | | T 20050825 | | | | JP . | 2003- | | 2 | 0030 | 217 | | | |
| | | | | | | A 20060127 | | | | JP 2003-567874 NZ 2003-534296 | | | | | | 20030217 | | | |
| | NZ 541682 | | | | А | | 2006 | | | | | | | | | 0030 | | | |
| | _ | CN 1907968 | | | | A | | | | | CN 2006-10110091 | | | | | | | | |
| | | | | | C2 | | 20080727 | | RU 2004-122114 | | | | | | 20030217 | | | | |
| | | 3 149695 | | | | A1 A | | | | SG 2006-5606 | | | | | | 20030217 | | | |
| | | 2004DN02041 2004007906 2004006509 20050107428 2004003899 | | | | | 20050401 20041015 | | IN 2004-DN2041 MX 2004-7906 | | | | | | | | | | |
| | | | | | | | | 050915 | | | | ·7906 ·6509 | | | 2 | | | | |
| | | | | | | | | 20050519 | | | | | | | | | | | |
| | | | | | A | | 20041117 | | | NO . | 2004- | 4-3899 | | | 2 | 20040917 | | | |
| | IN 2007DN09369 | | | | | | | | | | | 2007- | | | | | | | |
| PRAI SE 2002-465 | | | | | | А | | 2002 | | | | | | | | | | | |

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SE 2002-2673
                                20020909
                          Α
     CN 2003-804130
                          А3
                                20030217
     NZ 2003-534296
                          Α1
                                20030217
                                20030217
     WO 2003-SE258
                          T/v7
     IN 2004-DN2041
                          А3
                                20040715
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
     CASREACT 139:197375; MARPAT 139:197375
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GΙ

AΒ The invention provides piperidinyl alcs. (shown as I; variables defined below; e.g. N-[(2R)-3-[4-(3,4-dichlorophenoxy)piperidin-1-y1]-2hydroxypropyl]-2-(methylsulfonyl)benzamide) for use as modulators of chemokine receptor (especially CCR3) activity for use in, for example, treating asthma. For I: X is CH2, O, S(O)2 or NR10; Y is a bond, CH2, NR35, CH2NH, CH2NHC(O), CH(OH), CH(NHCOR33), CH(NHSO2R34), CH2O or CH2S; Z is C(O), or when Y is a bond Z can also be S(0)2; R1 is (un)substituted aryl, (un) substituted heterocyclyl or C4-6 cycloalkyl fused to a benzene ring; addnl. details are given in the claims. Percent inhibition at 3 nM eotaxin of eotaxin-mediated human eosinophil chemotaxis is tabulated for 16 examples of I, e.g. 106 % for N-[(2R)-3-[4-(3,4dichlorophenoxy)piperidin-1-yl]-2-hydroxypropyl]-1-oxo-1,2dihydroisoquinoline-4-carboxamide. Histamine H1 receptor binding activity was determined for the same compds., e.g. pKi = 8.4 for N-[(2R)-3-[4-(3,4-dichlorophenoxy)piperidin-1-y1]-2-hydroxypropy1]-1-oxo-1,2-dihydroisoquinoline-4-carboxamide. 49 Example prepns. of intermediates and 234 of I are included. For example, to prepare N-[(2R)-3-[4-(3,4-Dichlorophenoxy)piperidin-1-y1]-2-hydroxypropy1]-2-(methylsulfonyl) benzamide (0.055 g), a mixture of 2-(methylsulfonyl) benzoic acid (0.063 g), (2R)-1-amino-3-[4-(3,4-dichlorophenoxy)piperidin-1yl]propan-2-ol (0.1 g) and N, N-diisopropylethylamine (0.1 mL) in dry DMF (3 mL) was cooled to 0° with stirring; 2-(1H-9-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (0.13 g) was added and the mixture was stirred at 0° for 1-2 h. The invention also provides a process for making 4-(3,4-dichlorophenoxy)piperidine, which is useful as an intermediate for making certain compds. of the invention. The process comprises (a) reacting 4-hydroxypiperidine with a suitable base in a suitable solvent at room temperature; and (b) heating the mixture so produced and 1,2-dichloro-4-fluorobenzene at 50-90°, or at reflux of the solvent 583882-31-9P, 1-[(R)-3-[4-(3,4-Dichlorophenoxy)piperidin-1-y1]-2-

(drug candidate; preparation of piperidinyl alcs. as chemokine receptor

1-[(R)-3-[4-(3,4-Dichlorophenoxy)piperidin-1-y1]-2-hydroxypropy1]-3-p-

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

hydroxypropyl]-3-o-tolylurea 583882-32-0P,

tolylurea

(Uses)

modulators for treatment of diseases such as asthma)

RN 583882-31-9 CAPLUS

CN Urea, N-[(2R)-3-[4-(3,4-dichlorophenoxy)-1-piperidinyl]-2-hydroxypropyl]-N'-(2-methylphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

RN 583882-32-0 CAPLUS

CN Urea, N-[(2R)-3-[4-(3,4-dichlorophenoxy)-1-piperidinyl]-2-hydroxypropyl]-N'-(4-methylphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:173585 CAPLUS

DN 138:221471

TI Preparation of piperidine derivatives as modulators of chemokine receptor activity

IN Evans, Richard; Perry, Matthew; Springthorpe, Brian

PA Astrazeneca AB, Swed.

SO PCT Int. Appl., 54 pp. CODEN: PIXXD2

DT Patent

LA English

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| | ΡI | WO 2003018556 | | | | | A1 | | 20030306 | | WO 2002-SE1401 | | | | | | 20020719 | | |
| | | | W: | ΑE, | AG, | AL, | AM, | ΑT, | ΑU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, |
| | | | | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, |
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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
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                                 20030310
                                            AU 2002-321969
     AU 2002321969
                          A1
                                                                    20020719
     EP 1412330
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                                20040428
                                             EP 2002-756046
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     JP 2005503394
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                                            JP 2003-523220
                                                                    20020719
     US 20040176411
                          A1
                                 20040909
                                            US 2004-483138
                                                                    20040108
     US 7265227
                          В2
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PRAI GB 2001-17899
                                20010723
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     WO 2002-SE1401
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                                20020719
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
     CASREACT 138:221471; MARPAT 138:221471
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AB The title compds. [I; T = CO, SO2; W = CO, SO2; X = CH2, O, NH; Y = CR11, N; n = 0-2; m = 1 or, when Y = CR11, m = 0; R1 = (un) substituted aryl, heterocyclyl; R2-R8 = H, alkyl optionally substituted by OH; R9 = H, alkyl; R10 = alkyl, (un) substituted aryl, aralkyl, heterocyclyl; R11 = H, alkyl] which are modulators of chemokine (especially CCR3) activity and are especially

useful for treating asthma and/or rhinitis, were prepared and formulated. Thus, reacting 4-(3,4-dichlorophenoxy)-1-piperidineethanamine (preparation given) with 4-methylbenzenesulfonyl isocyanate in CH2Cl2 afforded II which was found to be an antagonist of the eotaxin mediated human eosinophil chemotaxis in calcium flux [Ca2+]i assay, and H1 antagonist when tested in Guinea-pig isolated trachea.

IT 500859-22-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperidine derivs. as modulators of chemokine receptor activity)

RN 500859-22-3 CAPLUS

CN Benzenesulfonamide, N-[[(2R)-3-[4-(3,4-dichlorophenoxy)-1-piperidiny1]-2-

hydroxypropyl]amino]carbonyl]-4-methyl- (CA INDEX NAME)

Absolute stereochemistry.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT